

**FIG. 1**  
 (PRIOR ART)

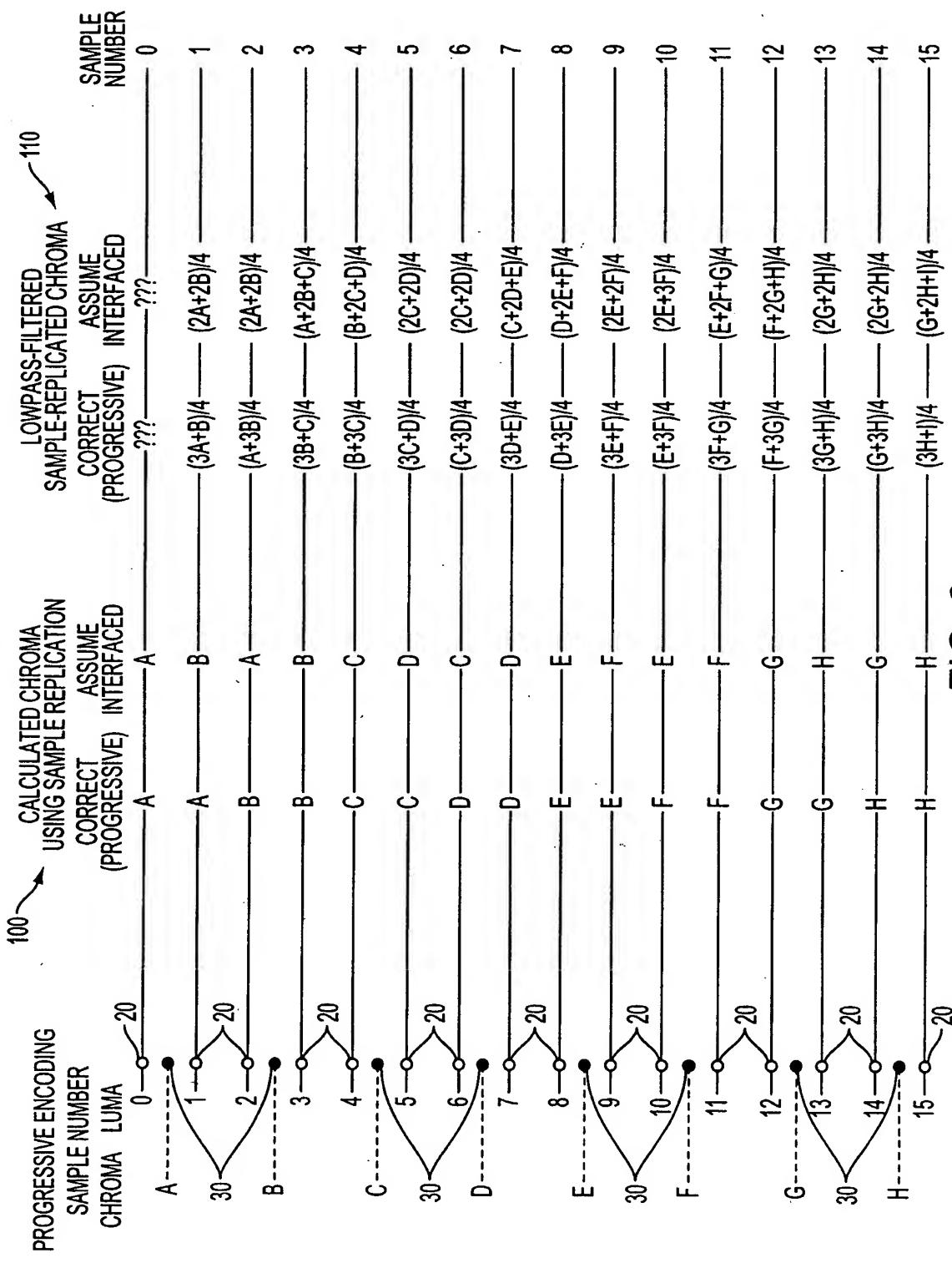


FIG. 2

| SAMPLE NUMBER | ACTUAL PROGRESSIVE ENCODING | CALCULATED CHROMA USING LINEAR INTERPOLATION | VERTICAL CHROMA TRANSITION | FREQUENCY DETECTION VALUES |          | SAMPLE CALCULATED EVEN VALUES | SAMPLE CALCULATED ODD VALUES | FREQ. DET. SUM | FREQUENCY DETECTION VALUES | SAMPLE CALCULATED EVEN VALUES | SAMPLE CALCULATED ODD VALUES | FREQ. DET. SUM |
|---------------|-----------------------------|--|----------------------------|----------------------------|----------|-------------------------------|------------------------------|----------------|----------------------------|-------------------------------|------------------------------|----------------|
|               |                             |  |                            | FLD REF.                   | FLD REF. |                               |                              |                |                            |                               |                              |                |
| 0             | ○                           | ???  | ???                        | -1                         | 1        | -1                            | 1                            | 1              | 1                          | -1                            | 1                            | 1              |
| A             | ●                           | (3A+B)/4                                     | ???                        | 1                          | -1       | 1                             | -1                           | 1              | 1                          | -1                            | 1                            | 1              |
| B             | ●                           | (A+3B)/4                                     | (3A+C)/4                   | 1                          | 0        | 1                             | 0                            | 1              | 1                          | 0                             | 1                            | 0              |
| C             | ●                           | (3B+C)/4                                     | (3B+B)/4                   | 1                          | 0        | 1                             | 0                            | 1              | 1                          | 0                             | 1                            | 0              |
| D             | ●                           | (B+3C)/4                                     | (A+3C)/4                   | 1                          | 0        | 1                             | 0                            | 1              | 1                          | 0                             | 1                            | 0              |
| E             | ●                           | (3C+D)/4                                     | (B+3D)/4                   | 1                          | 0        | 1                             | 0                            | 1              | 1                          | 0                             | 1                            | 0.5            |
| F             | ●                           | (C+3D)/4                                     | (3C+E)/4                   | 1                          | 0.5      | 1                             | 0.75                         | 0.25           | 1                          | 0.5                           | 0                            | 0              |
| G             | ●                           | (3D+E)/4                                     | (3D+F)/4                   | 1                          | 0.5      | 1                             | 0.5                          | 0.5            | 1                          | 0.5                           | 0                            | 0.5            |
| H             | ●                           | (D+3E)/4                                     | (C+3E)/4                   | 1                          | 2        | 1                             | 0.25                         | 1              | 1                          | 0.5                           | 0                            | 0.5            |
| I             | ●                           | (3E+F)/4                                     | (D+3F)/4                   | 1                          | -0.5     | 1                             | 0.5                          | 0.5            | 1                          | 0.5                           | 1                            | 1.5            |
| J             | ●                           | (3F+G)/4                                     | (D+3F)/4                   | 1                          | -1       | 1                             | 0.25                         | 1              | 1                          | 0.5                           | 1                            | 1.5            |
| K             | ●                           | (E+3G)/4                                     | (3E+G)/4                   | 1                          | 0.5      | 1                             | -0.25                        | 1.5            | 1                          | -0.5                          | 1                            | 0              |
| L             | ●                           | (F+3G)/4                                     | (E+3G)/4                   | 1                          | 0.5      | 2                             | -0.75                        | 1              | 1                          | -0.5                          | 1                            | 0              |
| M             | ●                           | (3G+H)/4                                     | (F+3H)/4                   | 1                          | -1       | 1                             | -1                           | -1             | 1                          | -1                            | 1                            | -0.5           |
| N             | ●                           | (G+3H)/4                                     | (3G+)/4                    | 1                          | -0.5     | 1                             | -0.25                        | -1             | 1                          | -1                            | 1                            | 0              |
| O             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | -1                           | -1             | 1                          | -1                            | 1                            | 0              |
| P             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| Q             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| R             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| S             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| T             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| U             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| V             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| W             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| X             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| Y             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| Z             | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AA            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AB            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AC            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AD            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AE            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AF            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AG            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AH            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AI            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AJ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AK            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AL            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AM            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AN            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AO            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AP            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AQ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AR            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AS            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AT            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AU            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AV            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AW            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AX            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AY            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AZ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BA            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BB            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BC            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BD            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BE            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BF            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BG            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BH            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BI            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BJ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BK            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BL            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BM            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BN            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BO            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BP            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AQ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AR            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AS            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AT            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AV            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AW            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AX            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AY            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AZ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BA            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BB            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BC            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BD            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BE            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BF            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BG            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BH            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BI            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BJ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BK            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BL            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BM            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BN            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BO            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BP            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AQ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AR            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AS            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AT            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AV            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AW            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AX            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AY            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| AZ            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BA            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BB            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BC            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BD            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BE            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BF            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BG            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BH            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1                             | 0.25                         | 0.25           | 1                          | -1                            | 1                            | 0              |
| BI            | ●                           | (3H+)/4                                      | (3H+)/4                    | 1                          | 0        | 1</                           |                              |                |                            |                               |                              |                |

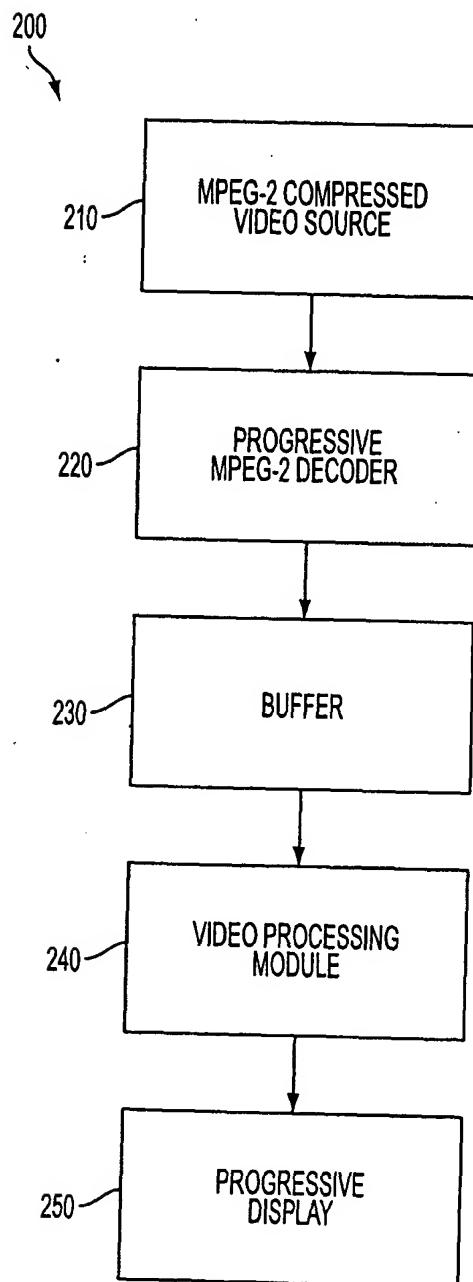


FIG. 4

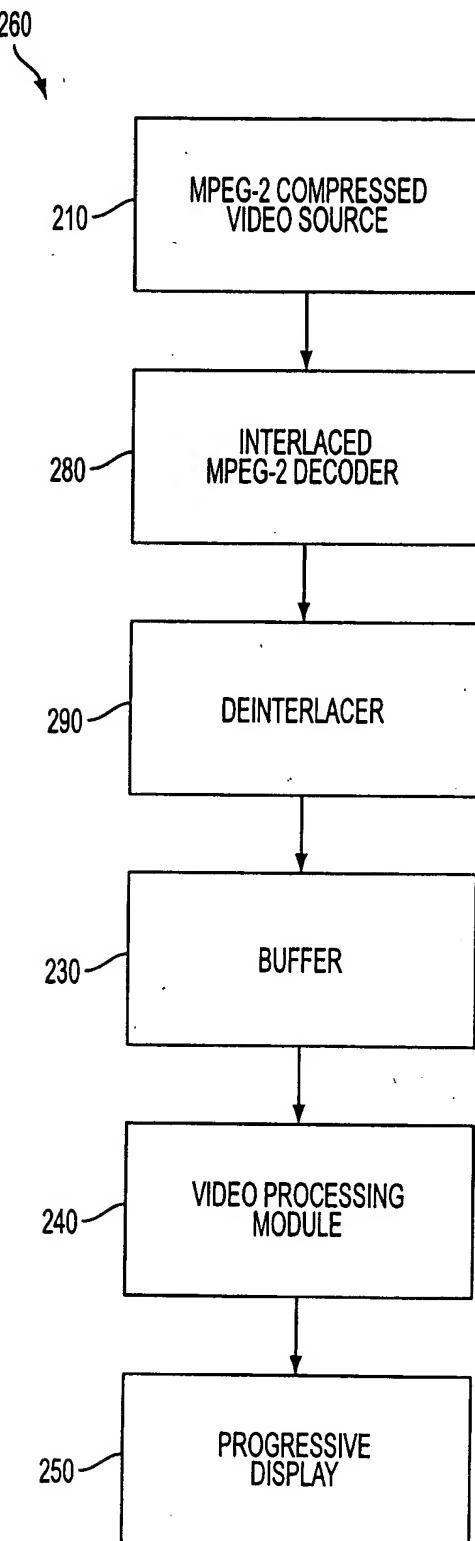


FIG. 5

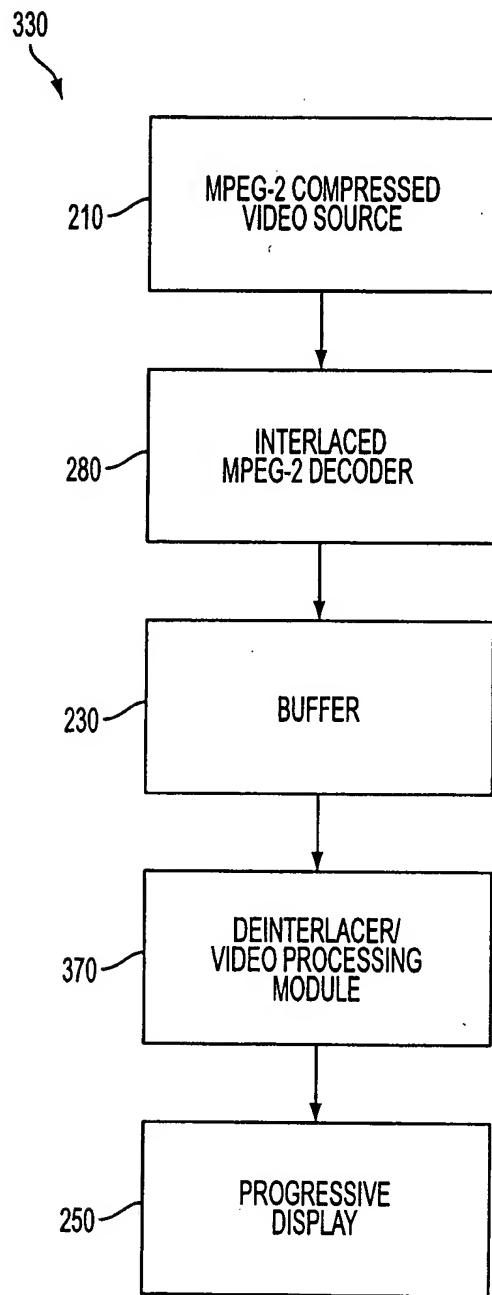


FIG. 6